

SKUPHONURA KENSLEYI (CRUSTACEA: ISOPODA),
A NEW ANTHURIDEAN SPECIES FROM THE
CARIBBEAN COAST OF COLOMBIA

Richard C. Brusca and Hans-Georg Müller

Abstract.—A new species of Anthuridea, *Skuphonura kensleyi*, is described from the Caribbean coast of Colombia, where it inhabits littoral and shallow-water habitats. The new species resembles *S. lindae* Menzies & Kruczynski, 1983 and *S. itapuca* Kensley, 1980, but is distinguished by a suite of distinct features. The genus *Skuphonura*, which is restricted to the New World, is rediagnosed, and a key to the known species of *Skuphonura* is presented.

Barnard (1925) created the genus *Skuphonura* for the new species, *S. laticeps*, based on three male specimens collected near St. Thomas, U.S. Virgin Island, and one female from Tobago. The genus received scant attention until Kensley (1980) redescribed *S. laticeps* based on the syntypes (tentatively excluding the one female specimen) and described two additional species from South America, *S. itapuca* (from Rio de Janeiro, Brazil) and *S. ecuadorensis* (from La Libertad, Ecuador). Kensley (1980) also presented a revised diagnosis for the genus, noting its similarity to *Mesanthura*. He suggested that two features immediately separating these two genera are the presence of a persistent pigment pattern in *Mesanthura* (thought to be absent in *Skuphonura*), and the [presumed always] unarticulate flagella of both the antennules and the antennae of *Skuphonura* (the antennular and antennal flagella of *Mesanthura* both comprise more than one article). In 1983, Menzies & Kruczynski described a fourth species of *Skuphonura*, *S. lindae* from central west Florida. We herein describe a fifth species, *Skuphonura kensleyi*, from the Caribbean coast of Colombia, and provide a new diagnosis and comments on the genus and a key to the five known species.

Because the genus and its species are poorly known, the species description is

rather detailed and repeats some characters currently regarded as generic attributes. All specimens are deposited in the National Museum of Natural History, Smithsonian Institute (USNM).

Systematics

Subphylum Crustacea Pennant
Class Malacostraca Latreille
Superorder Peracarida Calman
Order Isopoda Latreille
Suborder Anthuridea Leach
Family Anthuridae Leach
Skuphonura Barnard, 1925

Skuphonura.—Barnard, 1925:145, text fig. 10, pl. 4, fig. 15—Miller, 1968:26 (fig. 4); Kensley, 1980:731 (figs 5–9); Menzies & Kruczynski, 1983:30 (fig. 10); Kensley & Schotte, 1989:58 (fig. 25).

Diagnosis.—Cephalon with posteromedial, toothlike, ventral cephalic process situated behind the mouthparts and directed anteriorly; males with one ventral cephalic process, females often (always ?) with two processes. Cephalon and body with or without pigment pattern; cephalon may be markedly wider anteriorly due to rounded, expanded, anterolateral lobes that bear the eyes (in 2 of the 5 known species). Antennules 4- to 6-articulate, females of a given

species possibly possessing one more article than males; antennae 6- to 8-articulate; mandible with 3-articulate palp, distal article markedly shorter than articles 1 and 2; with well-developed incisor and lamina dentata, and lobe-like molar process; maxilliped 5-articulate, terminal article very small and often somewhat immersed in penultimate article, penultimate article largest, antepenultimate article shorter than adjacent articles. Fused coxal plates usually visible in dorsal aspect on pereonites 2–7; pereopod 1 subchelate, with large propodus, acutely triangular carpus, and very short merus; posterior pereopods with acute scales on margins of propodi and dactyli; pereopods 1–7 carpi triangular. Pleonites fused, but with suture lines (incisions) present ventrolaterally; fusion of pleonite 6 with pleonite 5 and with telson demarcated dorsally by deep grooves; pleotelson ovate, distally rounded, with pair of basal statocysts; pleopod 1 exopod operculate, somewhat indurate; appendix masculinae arise about $\frac{1}{3}$ way up margin of pleopod 2 endopods and extended beyond endopod apices; uropodal exopod ovate, with distal notch.

Remarks.—There has been some confusion regarding the number of articles in the peduncle and flagellum of the antennules and antennae in this genus. Further confusion arises from the fact that females (in any given species) may possess an antennule with one more article than found in males, this being the short fourth article which we regard as the first flagellar article. Thus the antennules of *S. itapuca* and *S. ecuadorensis* appear to have 3 peduncular articles and one flagellar article in males, but 3 peduncular articles and 2 flagellar articles in females. In *S. linae*, females seem to have 3 peduncular articles and 3 flagellar articles (according to Menzies & Kruczynski 1983). However, the literature is rather unclear on this issue, as the distalmost flagellar articles are often compressed and difficult to see. Males are not yet known for *S. lindae*, and females are not yet known for *S. laticeps* and *S. kensleyi*.

The genus *Skuphonura* does not appear to possess any unique defining synapomorphies. It is very similar to four other genera of Anthuridae: *Mesanthura* Bernard, 1914; *Apanthura* Stebbing, 1900; *Apanthuretta* Wägele, 1981; and *Apanthuropsis* Poore & Lew Ton, 1985. One of the most diagnostic features of *Skuphonura* is the ventral cephalic process (a large antero-ventrally directed process that arises just posterior to the maxillipeds). In those species where both sexes have been described (*S. itapuca* and *S. ecuadorensis*), males have one process and females have two processes (one behind the other). However, certain species of *Apanthura* and *Apanthuretta* also possess a ventral cephalic process (e.g., *Apanthura thryptomene* Poore & Lew Ton, 1985; *Apanthura xanthorrhoea* Poore & Lew Ton, 1985; *Apanthuretta correa* Poore & Lew Ton, 1985). The maxillipeds, pereopods, and uropods are also very similar among *Skuphonura*, *Apanthura*, *Apanthuretta*, and *Apanthuropsis*. The segmentation of the antennules and antennae, and presence vs. absence of body pigmentation, cannot be relied upon to discriminate *Skuphonura* from *Mesanthura*. However, it does appear that pigmented *Mesanthura* specimens retain their pigmentation for many years in alcohol preservative, perhaps longer than do pigmented specimens of *Skuphonura* (as noted by Kensley 1980).

Skuphonura kensleyi, new species
(Figs. 1–5)

Material examined.—Holotype, immature: Colombia, Santa Marta, Punta de Betin, under algal-covered rocks on sandy bottom, 2–3 m depth, 24 Dec 1985 (USNM 250983). Paratypes: 1 male, 1 immature, 2 postmanicas, and 4 mancas, taken with the holotype; 1 male and 1 postmanca, same locality, in coral rubble, 6 m depth, 4 Aug 1985; 2 immatures, same locality, under rocks on sand bottom, 0–1 m depth, 28 Jan 1989; 3 males, same locality, under rocks

on sandy bottom with debris, 1–2 m depth, 4 Feb 1989.

Description. — *Immature stage:* Length (front of cephalon to apex of pleotelson) 3.0–5.7 mm; relative lengths of body segments $C < 1 > 2 > 3 < 4 = 5 > 6 > 7$. Cephalon and pereon with distinct pigment reticulations (as figured). Cephalon widest at midline, lateral margins slightly convex; eyes small, with 5–6 ommatidia, well-pigmented. Fused coxal plates of all pereonites visible in dorsal aspect. Pleonites 1–6 fused; segments 1–5 indicated laterally by short incisions; pleomere 6 with posterior marginal notch; with many setae on distal third of pleotelson, arranged in characteristic pattern.

Antennule articles decreasing in size distally; second article with 5, and third with 2, stiff, laterally directed simple setae near outer distal margin; flagellum 3-articulate, second article longest, third article with 2 simple setae and a distal aesthetasc. Antenna second article longest, flared and grooved to accommodate peduncle of antennule; flagellum 1-articulate, with numerous simple apical setae. Mandible with 3-articulate palp; second article with 2 simple setae and short distal article with 3 simple setae; incisor of single cusp, lamina dentata with about 6 serrations, molar process oval and simple. Maxilla slender, with 6 distal teeth and 1 small seta between the distal and penultimate tooth. Maxilliped with elongate-oval endite bearing an apical seta; second segment of 3-articulate palp largest; distal article smallest and with about 6 medially-directed robust setae.

Pereopod 1 subchelate, propodus with simple setae. Pereopods 2–7 propodi inferior margin with several setae and a robust distal spine; pereopods 5–6 propodi with marginal scales; pereopod 7 propodus with 2 serrate apical spines. Pereopods 1–7 dactyli with distal setae; dactylus of pereopod 7 additionally with marginal scales on inferior and superior margins. All pereopods with carpus triangular; carpus of P-1 with toothlike projection at posterodistal corner;

P-4 to P-7 with a short stout spine at posterodistal corner of carpus.

Uropodal endopod extending somewhat beyond apex of pleotelson; exopod oval, with shallow apical notch; endopod shorter than protopod, 1.9 times longer than wide.

Male: Length 4.5–5.7 mm. Similar to immature stage; with distinct ventral cephalic process; eyes somewhat larger than in immatures; antennule flagellum with 3 compressed articles, two distal ones bearing many aesthetascs; palm of pereopod 1 propodus excavate, with rounded proximal and distal tubercles; in one of the smallest males observed, the distal tubercle is reduced; medial surface of propodus with several setae; pereopod 7 more slender than other pereopods; inferior margin of propodus and distal inferior margin of dactylus with row of rounded scales. Exopod of pleopod 1 operculiform, distal margin with about 28 plumose marginal setae (setules not illustrated); appendix masculinae of pleopod 2 endopod articulating about $\frac{1}{3}$ distance from base; exopod somewhat shorter and wider than endopod; endopod with about 6, exopod with about 8 distal plumose marginal setae (setules not illustrated).

Female: Unknown.

Postmanca: Length 1.8–2.6 mm. Similar to immature stage; pigment reticulations on pereonites and pleon indistinct; pleotelson similar to immatures with distinct setation; shape of pereopods as in immatures, although all segments less setose.

Manca: Length 1.7–2.1 mm. Similar to postmanca except all segments of pereopods generally less setose, and pereopod 7 wanting.

Remarks. — *Skuphonura kensleyi* is somewhat similar in appearance to *S. lindae* Menzies & Kruczynski, 1983 and *S. itapuca* Kensley, 1980. Of the known species in this genus, these three lack the greatly expanded anterolateral cephalic lobes. Although Kensley (1980) stated that in *S. itapuca* the cephalon is anteriorly slightly wider than posteriorly, examination of the type series revealed that the lateral margins of the

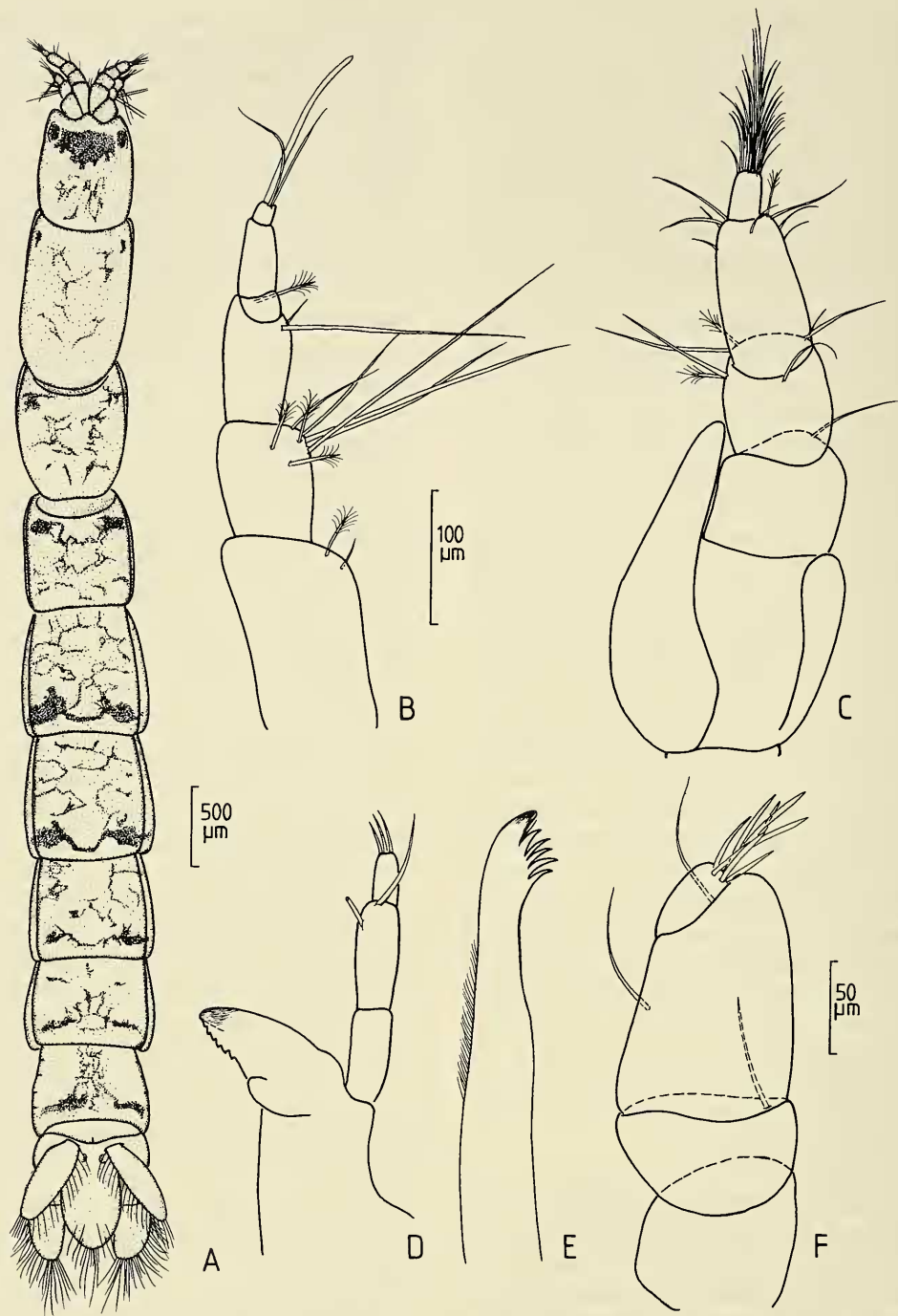


Fig. 1. *Skuphonura kensleyi* n. sp., holotype. A, dorsal view. B, antennule. C, antenna. D, mandible. E, maxilla. F, maxilliped.

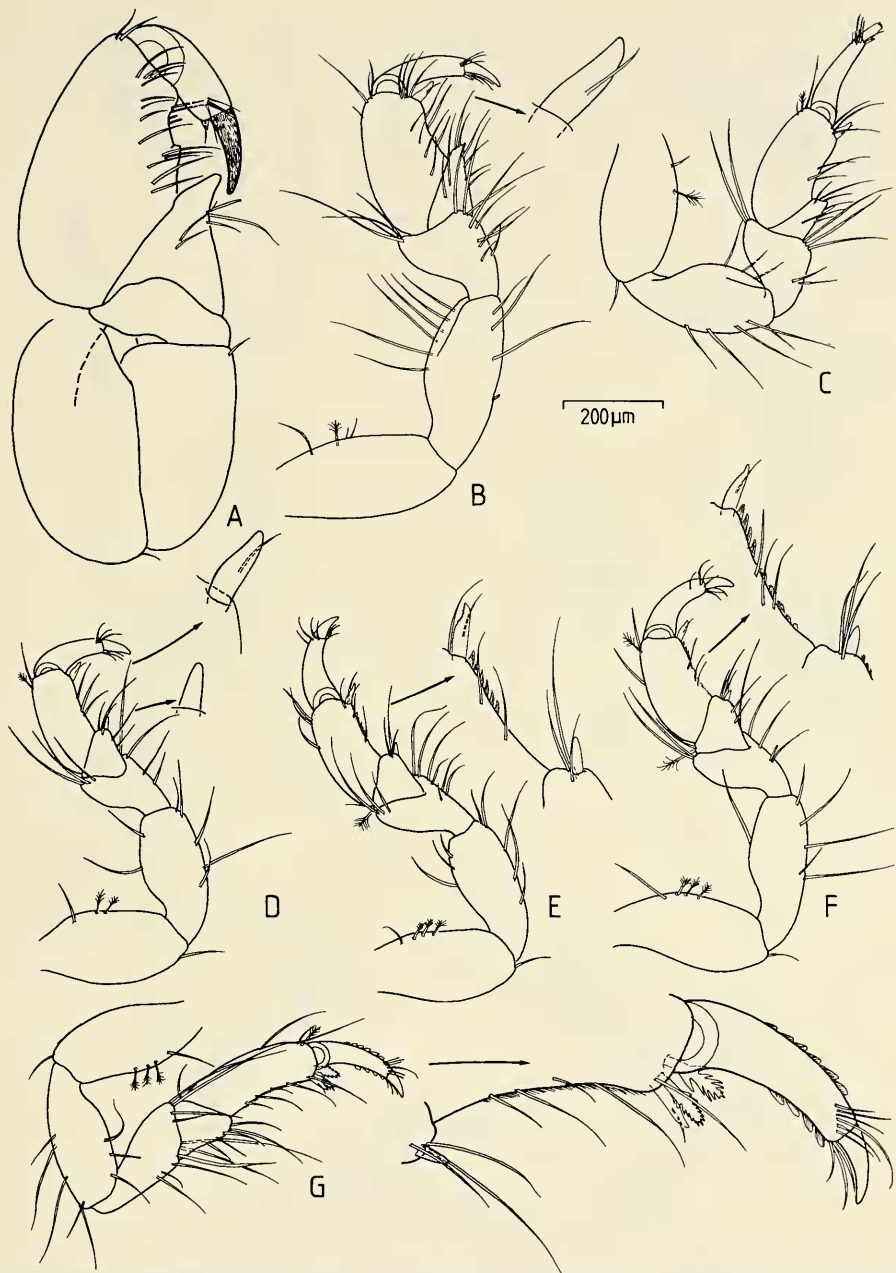


Fig. 2. *Skuphonura kensleyi*, n. sp., holotype. A, pereopod 1. B, pereopod 2. C, pereopod 3. D, pereopod 4. E, pereopod 5. F, pereopod 6. G, pereopod 7.

cephalon are evenly convex, with the widest region being slightly anterior to the middle of the cephalon; large anterolateral lobes are lacking.

Skuphonura kensleyi is a shallow-water species found from the intertidal zone to a depth of 6 m. It has been found in association with coral rubble and rocks on sandy

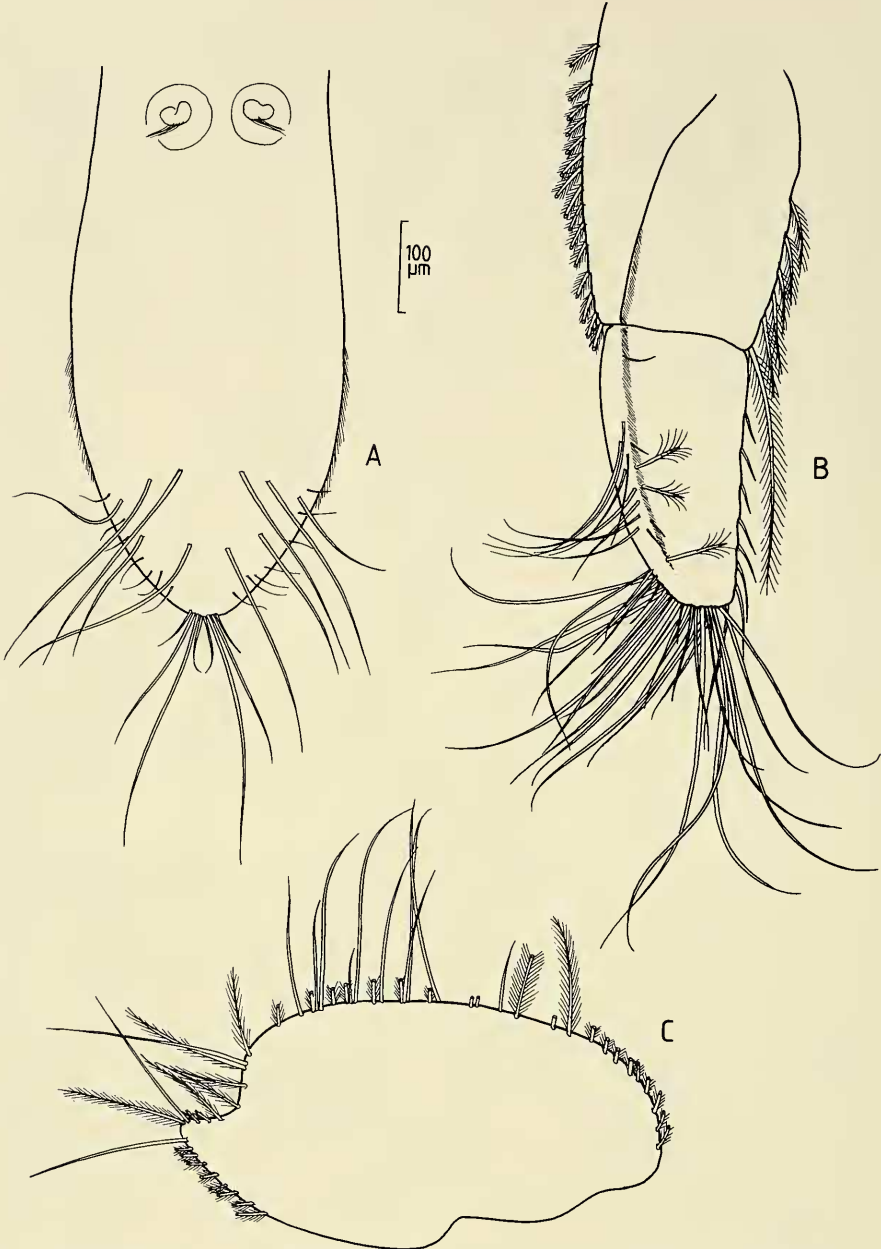


Fig. 3. *Skuphonura kensleyi*, n. sp., holotype. A, telsonic region of pleotelson. B, uropodal peduncle and endopod. C, uropodal exopod.

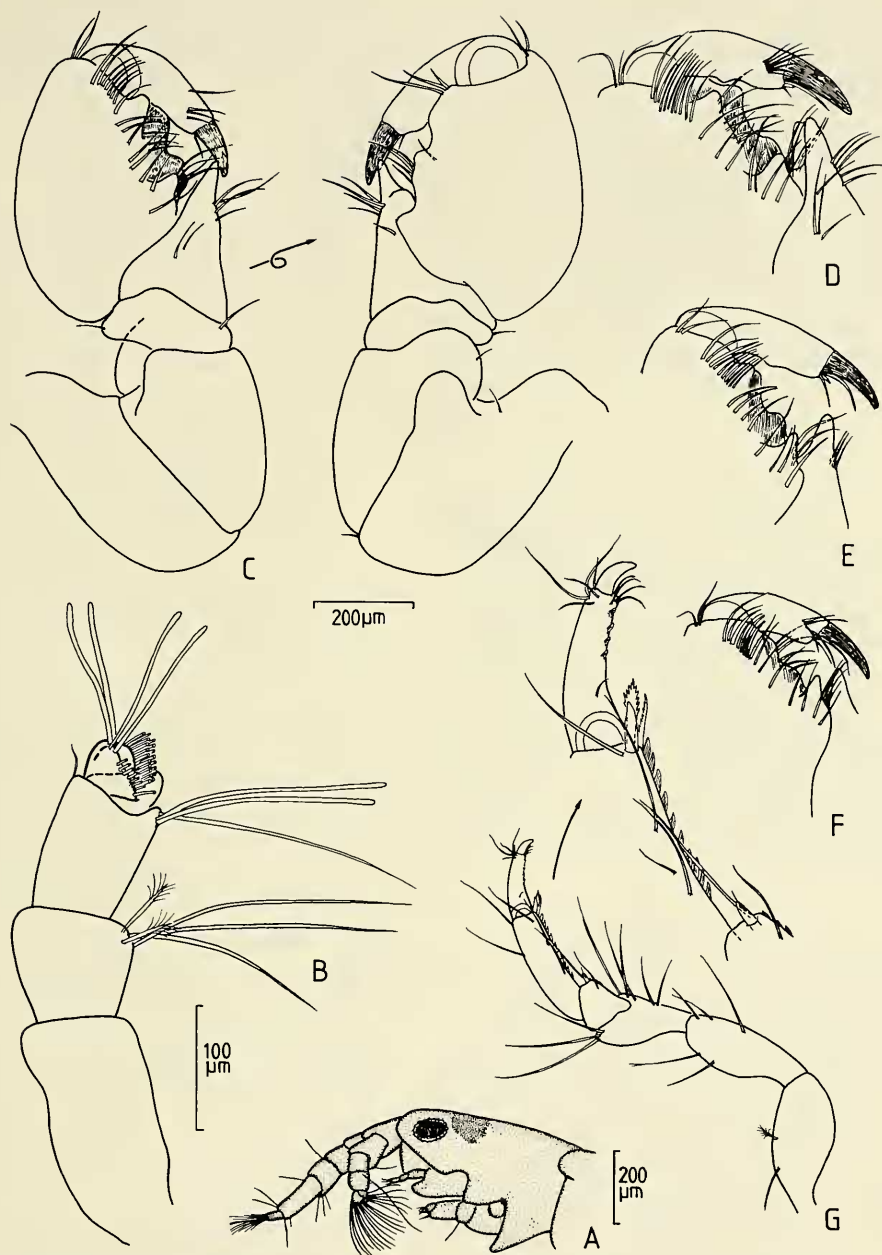


Fig. 4. *Skuphonura kensleyi*, n. sp., male paratypes. A, cephalon, lateral view. B, antennule. C, pereopod 1 inner and outer surfaces. D–F, distal portion of pereopod 1 from three different specimens. G, pereopod 6.

bottoms. Surprisingly, this new species has been found exclusively at Punta de Betin in Santa Marta, although extensive collecting was carried out over approximately 70 km

of coastline in this region for more than one year.
Etymology.— We take great pleasure in naming this species after Dr. Brian Kensley,

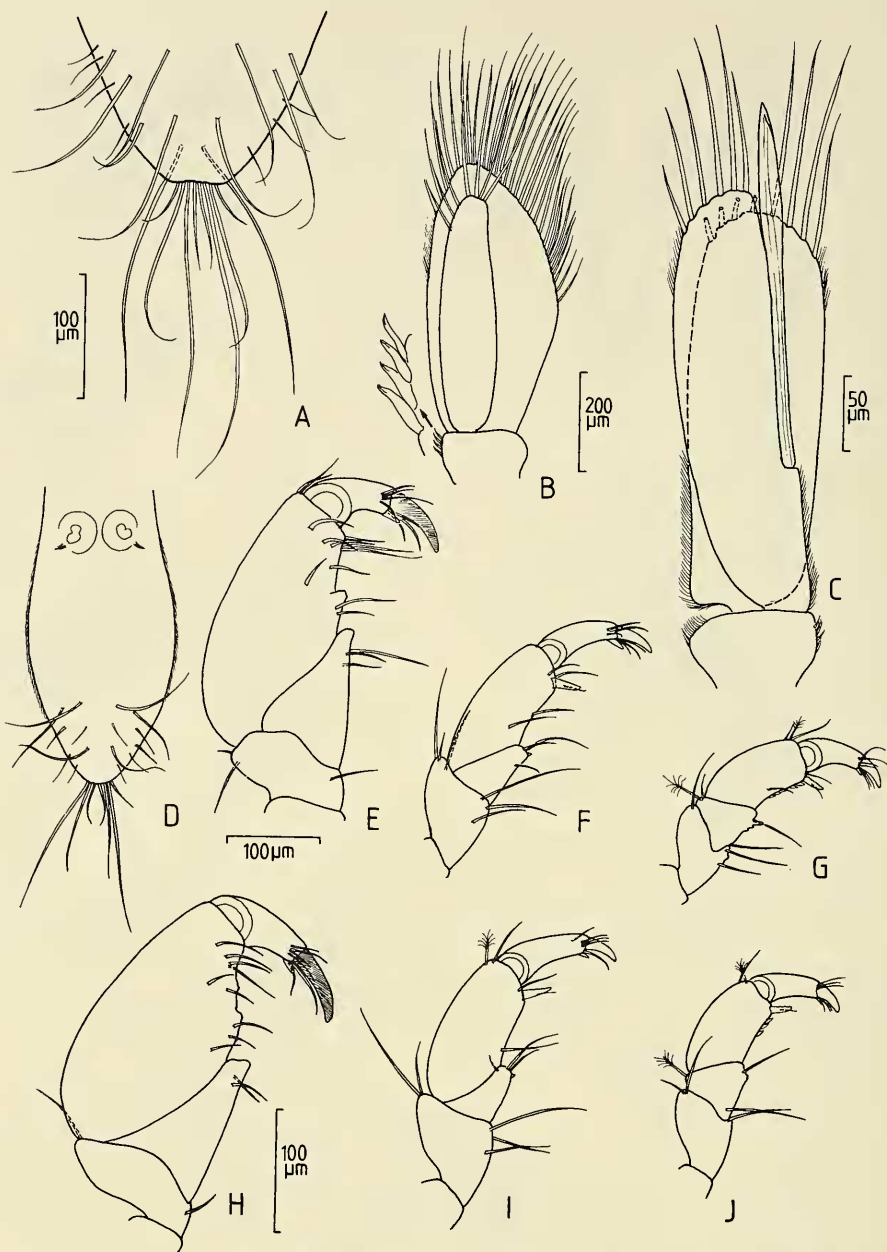


Fig. 5. *Skuphonura kensleyi*, n. sp., paratypes. A, distal region of pleotelson (male paratype). B, pleopod 1 (male paratype). C, pleopod 2 (male paratype). D, telsonic region of pleotelson (postmanca). E, distal region of pereopod 1 (postmanca). F, distal region of pereopod 2 (postmanca). G, distal region of pereopod 4 (postmanca). H, distal region of pereopod 1 (manca). I, distal region of pereopod 2 (manca). J, distal region of pereopod 4 (manca).

whose work has contributed greatly to our understanding of the genus *Skuphonura* and anthurideans in general.

Key to the Species of *Skuphonura*

- 1. Cephalon markedly wider anteriorly than posteriorly, with large rounded anterolateral lobes bearing the eyes 2
- Cephalon not markedly wider anteriorly than posteriorly, without large rounded anterolateral lobes . 3
- 2. Pleonite 1 with large, anteriorly-directed, ventral projection; pereopod 1 propodus without tubercles on inferior margin, but with a low, rounded, convexity; uropodal endopods barely reach pleotelson apex *S. laticeps*
- Pleonite 1 without a large ventral projection; pereopod 1 propodus with 2-3 distinct tubercles on the inferior margin; uropodal endopods extended barely beyond pleotelson apex *S. ecuadorensis*
- 3. Uropodal endopods extended barely beyond pleotelson apex; pereopod 1 propodus with a broad flat lobe on inferior margin *S. lindae**
- Uropodal endopods extended well beyond pleotelson apex; pereopod 1 not as above, instead with propodus with 1-3 large tubercles on inferior margin 4
- 4. Dactyli of pereopods 4-7 with triangular, marginal, spinose scales; pereopod 2 unguis length = 20% length of dactylus; pereopod 1 propodus with 2-3 tubercles on inferior margin; mandibular molar bilobed *S. itapuca*
- Dactylus of pereopod 7 only with triangular, marginal, spinose scales; pereopod 2 unguis length = 35-40% length of dactylus; pereopod 1 prop-

odus with 1-2 tubercles on inferior margin; mandibular molar single-lobed *S. kensleyi*, n. sp.

*Note: *Skuphonura lindae* may not belong to this genus. Generic characters of *Skuphonura* that may be lacking in *S. lindae* include: pleopod 1 exopod indurate and operculiform; cephalon with midventral toothlike process; carpi of pereopods 4-7 distinctly triangular; pleotelson with a pair of statocysts. However, until type material of *S. lindae* can be examined the question remains open.

Acknowledgments

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(RCB) San Diego Natural History Museum, San Diego, California, 92112; (HG-M) Zoologisches Institut, Neues Tierhaus, Heinrich-Buff-Ring 29, D-6300 Giessen, Germany.